## Remarks

Claims 1-10 and 12-81 were pending in the present application. Claim 11 is canceled. It is respectfully submitted that the pending claims define allowable subject matter.

Claim 26 has been rejected under 35 USC § 112 for lack of antecedent basis. Claim 12 has been amended to include proper antecedent basis. The above claim amendment is believed to overcome this rejection.

With respect to the rejections of Claims 26 and 55 under 35 U.S.C. § 101, Applicant submits that the rejection is improper as the previously pending claims do recite sufficient structure and steps to satisfy the requirements of 35 U.S.C. § 101. Notwithstanding, it is believed the above claim amendments further define the independent claims in a manner that clearly fall within the scope of statutory subject matter permitted under 35 U.S.C. § 101. Specifically, Claims 26 and 55 each recite to an apparatus that may be used to perform the method steps recited. For example, Claim 26 recites in part an "apparatus operable to parse a non-procedural image annotation template." Moreover, Claim 55 recites in part a "high-level language-based apparatus operable to receive the annotation presentation description and the image annotation object, the image annotation object containing text." Applicant respectfully submits that the apparatus recited in each rejected claim provides a sufficient tie between the method steps and a statutory apparatus, e.g. the apparatus. For at least the reasons stated above, Applicant respectfully requests that the 35 U.S.C 101 rejections of Claims 26 and 55 be withdrawn.

Turning to the remaining rejections, Claims 1, 4-6, 16, and 18-21 are rejected under 35 USC § 102(b) as being anticipated by Jain (US 2002/0073091). Claims 28, 31, 34, 37, 38, 40, 41, 45, 50, 57, 58, 75, 78, 79, 80, and 81 are rejected under 35 USC § 102(e) as being anticipated by Yamamoto (US 2005/0198202). Claim 7 has been rejected under 35 USC § 103(a) as being unpatentable over Jain in view of Goede (US 2006/0061595). Claims 2, 3, 8, 10,

12-15, 22-27, 55, and 59-74 have been rejected under 35 USC § 103(a) as being unpatentable over Jain in view of Yamamoto (US 2005/0198202). Claims 29, 30, 32, 33, 35, 42, 43, 44, 48, 49, 76, and 77 have been rejected under 35 USC § 103(a) as being unpatentable over Yamamoto in view of Goede. Claims 36, 39, 46 and 47 have been rejected under 35 USC § 103(a) as being unpatentable over Yamamoto in view of Jain. Claims 9, 11, and 56 have been rejected under 35 USC § 103(a) as being unpatentable over Jain, in view of Yamamoto, in further view of Goede. Claims 51, 52, 53, and 54 have been rejected under 35 USC § 103(a) as being unpatentable over Jain, in view of Yamamoto, in further view of Goede. Applicant respectfully traverses these rejections for reasons set forth hereafter.

Turning to the remaining rejections, Claims 1, 4-6, 16, and 18-21, Applicant respectfully submits that the pending rejection under 35 USC § 102(b) as being anticipated by Jain is improper. As stated in the MPEP 706.02, "for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly." In this case, the Office Action fails to find any support in Jain to reject the claim elements directed to "image annotation". However, despite the failure of the Jain reference to teach each and every aspect of the claimed invention as required, the Office Action has improperly applied a secondary reference to support the rejection.

More specifically, the Office Action specifically states:

"the set of viewing information includes: a) document information representing a selected file (document) in a format viewable in the Web browser (e.g. a Hyper-text Mark-up Language (HTML) file); b) annotation information representing annotations in a format viewable in the Web browser (e.g., an HTML file; and c) a script for allocating the annotations to the file (document) (e.g. JavaScript))". Page 5.

The same quote is also repeated again in the Office Action at least on Page 6. Applicant submits that the above citation is not present in the Jain reference. Applicant further submits that the above citation cites a secondary reference to Yamamoto (US 2005/0198202). (Page 4, Para. 70) Because the Office Action has combined two references, the rejection is improper, and the

rejection of Claims 1, 4-6, 16, and 18-21 should be withdrawn. Moreover, because the rejection of Claims 1, 4-6, 16, and 18-21 is improper, Applicant submits that the finality of the present Office Action should be withdrawn and either the claims allowed or a Non-Final Office Action issued.

With regards to Jain, Jain describes "translating an XML document to an object in an object-oriented language so that content of the XML document can be programmatically accessed." As discussed above, Jain does NOT describe "a non-procedural <u>image annotation template</u>, the translator being operable to translate the non-procedural <u>image annotation template</u> to <u>image annotation source code</u>; and a compiler operably coupled to the translator, the compiler being operable to receive the <u>image annotation source code</u> and to compile the source code into <u>an image annotation executable</u>."

The Office Action asserts on Page 4, that Jain describes a translator that is operable to receive a non-procedural image annotation template. To support this rejection the Office Action asserts that Jain describes "a Document Type Definition file (DTD) associated with an XML document defines how <u>mark up tags</u> within the document should be interpreted by the application presenting the document." As best understood by the Applicant, the Office Action asserts that the DTD file described by Jain is the same as the non-procedural image annotation template recited in the pending claims. Applicant disagrees.

As described by Jain, "[a] Document Type Definition file ("DTD") associated with an XML document <u>defines how the mark up tags within the document should be interpreted by the application presenting the document</u>." (Paragraph 3) As known in the art, a "mark up tag" is a fundamental characteristic of HTML. More specifically, a mark up tag is a command placed between wickets or angle brackets in the mark up language. Mark up tags are not revealed by a WEB browser but are invisible. As such, the HTML mark up tags described by Jain are NOT annotations, nor is there any reasonable rationale for using the known mark up tags as annotations on an image since markup tags are not shown on the WEB page. Finally, Jain does

not describe or suggest that "a translator that is operable to receive <u>a non-procedural image annotation template to enable text to be embedded on a medical image</u>." Nor does Jain describe or suggest " a compiler operably coupled to the translator, the compiler being operable to receive the image annotation source code and to compile the source code into <u>an image annotation executable adapted to be installed on a medical imaging system to enable the medical image including the embedded text to be viewed</u>."

With regards to Claim 18 specifically, Claim 18 recites in part that the translator of Claim 16 includes "a filler of hash table representing at least one DICOM element of the high-level language source code." Jain does NOT describe any portion of the above recitation. To reject Claim 18, the Office Action refers to Jain Figure 6. As described by Jain, "[i]n step 636, XML_to_Java translation tool 108 generates constructors of sections 424A and 428A." Applicant submits that Jain does not describe a filler of hash table. Nor does Jain describe a DICOM element. As known in the art, DICOM (Digital Imaging and Communications in Medicine) is a standard for handling, storing, printing, and transmitting information in a medical image environment. Jain is not concerned with medical imaging, nor does Jain discuss DICOM as asserted in the Office Action. For at least the reasons cited above, Applicant submits that Claims 1, 4-6, 16, and 18-21 are patentable over the cited art.

Claims 28, 31, 34, 37, 38, 40, 41, 45, 50, 57, 58, 75, 78, 79, 80, and 81 are rejected under 35 USC § 102(e) as being anticipated by Yamamoto (US 2005/0198202).

Yamamoto describes a method for attaching annotations to a source program. For example, Yamamoto describes when a source program is displayed, "a list of annotations attached to the displayed source program is displayed, so that the user, if he designates a specific annotation in the list, can view the specific annotation." (Paragraph 145). As described by Yamamoto, an annotation is note that is utilized to "administer <u>private, transitory</u>, and small-scale information" (Paragraph 6). Clearly, Yamamoto is describing a method that enables one programmer to attach a <u>temporary note</u> in the source code during the development of the source

code that may be viewed by other programmers also working to write the source code. After, the annotation is addressed or acted upon by the programmed, the transitory annotation is then deleted from the source code.

Yamamoto further describes that "an object of the present invention is to provide a method for causing a server to provide a plurality of client computers with annotation functions, thereby to allow users of the client computers to communicate with each other using annotations." (Paragraph 24). To achieve this object, Yamamoto describes that "[t]he user who attempts to attach an annotation to a document, prior to the attaching action, selects an "attach" portion in a plurality of menu options displayed in the menu frame. In response, an attach form that allows the user to attach annotations to a displayed document is displayed in the subframe. The user, thereafter, clicks at an object that the user wishes to annotate on the source program displayed in the source-view frame, whereby a target object is determined. The user further enters the content of an annotation that the user wishes to attach, into the attach form, and subsequently, the content of the form is transmitted from the client computer 50 to the server 10." (Paragraph 146)

However, Yamamoto does not describe or suggest that the system includes a template repository that stores non-procedural image annotation templates. Nor does Yamamoto describe that a template may be selected from the template repository. In contrast, Yamamoto describes a single attach form for annotating the source program. The select the single attach form, the user selects the "attach" option from the menu. The attach option then displays the single document that is used by the operator to attach an annotation to the source code.

Moreover, Applicant respectfully submits that Yamamoto does not describe "non-procedural image annotation templates each adapted to enable text to be embedded on a medical image. In contrast, as discussed above, the annotations described by Yamamoto are transitory. That is the annotations are temporary devices used by the programmers to write the source code.

25

After the annotations are viewed or acted upon by the programmer, the annotations are deleted from the source code.

For at least the reasons cited above, Claims 28, 31, 34, 37, 38, 40, 41, 45, 50, 57, 58, 75, 78, 79, 80, and 81 are submitted to be patentable over Yamamoto.

The rejection of Claim 7 as being unpatentable over Jain in view of Goede is respectfully traversed. As discussed above with respect to Claim 1, Jain does not describe "a translator that is operable to receive a non-procedural image annotation template to enable text to be embedded on a medical image." Nor does Jain describe or suggest "a compiler operably coupled to the translator, the compiler being operable to receive the image annotation source code and to compile the source code into an image annotation executable adapted to be installed on a medical imaging system to enable the medical image including the embedded text to be viewed." Additionally, Goede does not make up for the deficiencies of Jain. For at least the reasons cited above, Claim 7 is submitted to be patentable over Jain in view of Goede.

The rejection of Claims 2, 3, 8, 10, 12-15, 22-27, 55, and 59-74 as being unpatentable over Jain in view of Yamamoto is respectfully traversed. Claims 2 and 3 depend from Claim 1 which is submitted to be patentable over the cited art.

Claim 8 recites "wherein the procedural image annotation source code comprises procedural expression of the calculations and operations to enable a medical imaging system to annotate the medical image with embedded text." Applicant submits that neither Jain nor Yamamoto describe source code to enable a medical imaging system to annotate a medical image. Moreover, Applicant submits that it would not be obvious to combine Jain and Yamamoto. As discussed above, Jain is directed to translating an XML document to an object in an object-oriented language so that content of the XML document can be programmatically accessed. To accomplish this object, Jain describes using mark up tags within the document that are interpreted by the application presenting the document." Yamamoto is unrelated to Jain. Yamamoto is directed to using temporary annotations in source code, to assist multiple

programmers in writing the source code. Applicant submits that there is no rationale reason to use the single source code annotation template taught by Yamamoto to insert mark up tags into a document as taught by Jain. Moreover, neither Jain nor Yamamoto describes a medical imaging system to annotate a medical image as recited in Claim 8. For at least the reasons cited above, Claim 8 is submitted to be patentable over the cited art. Claims 10 and 12-15 and 22-25 are also considered to be patentable over the cited art for the reasons cited above.

Regarding Claim 26, Claim 26 recites in part an "apparatus operable to fill hash tables representing <u>DICOM elements</u> of high-level language source code." As discussed above, Jain does not describe a medical imaging system, nor does Jain describe "DICOM elements". To support this rejection, the Office Action asserts on Page 52 that Jain describes these elements in Figure 6, item #636. Applicant disagrees. Jain is not directed to a medical imaging system. Nor does Jain describe or suggest using DICOM. Moreover, nothing in Jain in Figure 6 supports the assertion that Jain uses DICOM elements. In contrast, Jain describes "[i]n step 636, XML_to_Java translation tool 108 generates constructors of sections 424A and 428A." For at least the reasons cited above, Claim 26 is patentable over the cited art. Claim 27 depends from Claim 26 and is therefore also considered patentable over the cited art.

Regarding Claims 55 and 59, Claim 55 recites in part "[a] high-level language-based system to generate and view an annotated medical image, from an annotation presentation description and an annotation object, wherein the annotation object conforms to the <u>Digital Imaging and Communications in Medicine standard</u> and has an image, wherein the annotation presentation description further comprises an annotation presentation description compiled from a non-procedural image annotation template and has instructions that are native to a processor, the system comprising: high-level language-based apparatus operable to receive the annotation presentation description and the image annotation object, the image annotation object containing text; and high-level language-based apparatus operable to invoke the native instructions contained in the annotation presentation description and using text from the image annotation

object, to generate and view the annotated medical image that is annotated with the text from the image annotation object.

As discussed above, neither Jain nor Yamamoto are directed to a medical imaging system. Nor does Jain or Yamamoto describe or suggest using DICOM. For at least the reasons cited above, Claims 55 and 59 are each patentable over the cited art. Claims 60-61 depend from Claim 59 and are therefore also considered patentable over the cited art.

Independent Claims 62, 64, and 70 each are directed to annotating a medical image. As discussed above, neither Jain nor Yamamoto describe or suggest a medical imaging system, nor annotating medical images. For at least the reasons cited above, Claims 62-74 are also patentable over the cited art.

The rejection of Claims 29, 30, 32, 33, 35, 42, 43, 44, 48, 49, 76, and 77 as being unpatentable over Yamamoto in view of Goede is respectfully traversed. Claims 29, 30, 32, 33, 35, 42, 43, 44, 48, 49, 76, and 77 depend from independent Claims 28, 31, 34, 45, and 75 respectively. Each of Claims 28, 31, 34, 45, and 75 is considered to be allowable over the cited art for at least the reasons cited above. As such, 29, 30, 32, 33, 35, 42, 43, 44, 48, 49, 76, and 77 are considered to be patentable over the cited art.

The rejection of Claims 36, 39, 46 and 47 as being unpatentable over Yamamoto in view of Jain is respectfully traversed. Claims 36, 39, 47, and 47 depend from independent Claims 34 and 45 respectively. Each of Claims 34 and 45 is considered to be allowable over the cited art for at least the reasons cited above. As such, 36, 39, 47, and 47 are considered to be patentable over the cited art.

The rejection of Claims 9, 11, and 56 as being unpatentable over Jain, in view of Yamamoto, in further view of Goede is respectfully traversed. Claim 11 is canceled. Claims 9 and 56 depend from independent Claims 8 and 55 respectively. Each of Claims 8 and 55 is considered to be allowable over the cited art for at least the reasons cited above. As such, Claims 9 and 56 are considered to be patentable over the cited art.

The rejection of Claims 51, 52, 53, and 54 as being unpatentable over Jain, in view of Yamamoto, in further view of Goede is respectfully traversed. Claim 51 recites in part "a method to generate and view an annotated medical image, from an image annotation object having an image and an annotation presentation description, wherein the annotation presentation description further comprises an annotation presentation description that is compiled from a non-procedural image annotation template and has instructions that are native to a processor that is operably coupled to the computer accessible medium, the method comprising: receiving the annotation presentation description and the image annotation object, the image annotation object containing text; and invoking the native instructions contained in the annotation presentation description and using text from the image annotation object, to generate and view the annotated medical image that is annotated with the text from the image annotation object."

As discussed above Jain and Yamamoto are not directed to medical imaging systems. Goede describes a method of annotating an image. Goede further describes that "[o]nce the image has been selected and opened (110), the next step is for the author to annotate the image (112)." (Paragraph 42). To annotate the image, Goede describes "[g]enerally, an annotation will include one or more of the following: a region of interest, a pointer, and textual information such as a symbol, a label and/or a caption." (Paragraph 42). For example, to annotate the image to reflect a region of interest, Goede describes that "an author generally draws a point, line, or polygon to indicate a region of interest." (Paragraph 43). To annotate the image to include a pointer, Goede describes that "the author selects where the tail of the pointer should appear, and an algorithm calculates the closest point on the region of interest to place the pointer tip." (Paragraph 44). To annotate the image to include textual information, Goede describes "[p]roviding the ability to add textual information about the annotation enables the author to comment or add their expert knowledge on contents of an image in the form of a symbol, label and caption. The comments may refer to a detail of the image or the annotated image as a whole." (Paragraph 45). As described by Goede, the image is annotated by the author by making the annotations directly on the image itself. As such, Goede does not describe or suggest

"an image annotation object having an image and an annotation presentation description. Since Goede teaches that the operator annotates the image directly, Goede does not require, nor does Goede discuss, "receiving the annotation presentation description and the image annotation object, the image annotation object containing text; and invoking the native instructions contained in the annotation presentation description and using text from the image annotation object, to generate and view the annotated medical image that is annotated with the text from the image annotation object.

Additionally, there is no obvious reason to combine Jain, Yamamoto and Goede. Specifically, Applicant submits that since Goede describes annotating the image directly, there is obvious reason to combine Goede with either Jain or Yamamoto. For example, Jain is directed to translating an XML document to an object in an object-oriented language so that content of the XML document can be programmatically accessed. Jain does not describe annotating an image and there is no reason to modify Jain to annotate an image. More specifically, annotating an image does not improve Jain's method of translating an XML image. Moreover, there is no reason to modify Yamamoto based on the teachings of Goede. As discussed above, Yamamoto is directed to a method for causing a server to provide a plurality of client computers with annotation functions, thereby to allow users of the client computers to communicate with each other using annotations. Goede clearly describes that the annotations are entered by the operator. As such, the system taught by Goede already includes the ability to perform annotation functions via manually input received by the operator. For at least the reasons cited above, Claim 51 is patentable over the cited art. Claims 52, 53, and 54 depend from Claim 51 and are therefore also considered to be patentable over the cited art.

In view of the foregoing comments, it is respectfully submitted that the prior art fails to teach or suggest the claimed invention. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

Respectfully Submitted,

Phillip A. Shipley, Reg. No.: 51,357
THE SMALL PATENT LAW GROUP
225 S. Meramec, Suite 725
St. Louis, Missouri 63105
(314) 584-4081